CLAIMS

1.   A base station apparatus comprising:

    a multiplexer that, when retransmission is requested from a communicating party, multiplexes retransmission

5 packet data requested for retransmission and new transmission packet data not requested for retransmission;

    a data amount controller that adjusts an amount of multiplexing data between the retransmission packet data

10 and the new transmission packet data in the multiplexer based on reception quality information of the communicating party contained in a received signal;

    a storage that temporarily stores the retransmission packet data and the new transmission packet data

15 multiplexed in the multiplexer; and

    a transmitter that transmits to the communicating party the new transmission packet data and the retransmission packet data stored in the storage.

20 2.   The base station apparatus according to claim 1, wherein when the retransmission packet data is stored in the storage, the transmitter transmits said retransmission packet data with a higher priority than the new transmission packet data to transmit.

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3.   The base station apparatus according to claim 1, wherein the data amount controller stores receivable data

amount information that associates the reception quality information with a receivable data amount in the communicating party and that is shared with the communicating party, detects the receivable data amount

5   by referring to the receivable data amount information using the reception quality information, and adjusts the multiplexing data amount so that the amount of data stored of the retransmission packet data and the new transmission packet data in the storage is less than or equal to the

10 receivable data amount.

4.   The base station apparatus according to claim 1, wherein the data amount controller stores transmission data rate information that associates the reception

15 quality information with a receivable transmission data rate in the communicating party and that is shared with the communicating party, detects the transmission data rate by referring to the transmission data rate information using the reception quality information,

20 calculates queuing delay time in the storage from the transmission data rate detected and the amount of data stored of the retransmission packet data and the new transmission packet data in the storage, and adjusts the multiplexing data amount so that the queuing delay time

25 is less than or equal to a predetermined threshold.

5.   The base station apparatus according to claim 4,

wherein the threshold is set at a value smaller than retransmission request transmission time elapsed between the time the communicating party requests the retransmission and the time the communicating party

5   requests again the retransmission when the retransmission packet data requested for retransmission is not received.

6.   A transmission method comprising: multiplexing retransmission packet data requested for retransmission

10 and new transmission packet data not requested for retransmission when retransmission is requested from a communicating party;

adjusting a multiplexing data amount of the retransmission packet data and the new transmission

15 packet data to be multiplexed in the multiplexer based on reception quality information of the communicating party contained in a received signal;

storing temporarily the retransmission packet data and the new transmission packet data multiplexed; and

20   transmitting the new transmission packet data and the retransmission packet data stored in the storage to the communicating party.

7.   A program for executing the process of:

25   multiplexing retransmission packet data requested for retransmission and new transmission packet data not requested for retransmission when retransmission is

requested from a communicating party;

adjusting a multiplexing data amount of the retransmission packet data and the new transmission packet data to be multiplexed based on reception quality

5 information of the communicating party contained in a received signal;

storing temporarily the retransmission packet data and the new transmission packet data multiplexed; and

transmitting the new transmission packet data and

10 the retransmission packet data stored in the storage to the communicating party.